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| 1. Record Nr. | UNINA9910298579503321 |
| Autore | Liu Jing |
| Titolo | Liquid Metal Biomaterials : Principles and Applications // by Jing Liu, Liting Yi |
| Pubbl/distr/stampa | Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2018 |
| ISBN | 981-10-5607-2 |
| Edizione | [1st ed. 2018.] |
| Descrizione fisica | 1 online resource (XVII, 428 p. 230 illus.) |
| Collana | Springer Series in Biomaterials Science and Engineering, , 2195-0652 ; ; 10 |
| Disciplina | 620.11 |
| Soggetti | Biomaterials Biomedical engineering Metals Biomedical Engineering and Bioengineering Metals and Alloys |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Introduction -- Thermal Physical Properties of Liquid Metal -- Electrical Properties of Liquid Metal -- Mechanical Properties of Low Melting Point Metal -- Biocompatibility of Liquid Metal -- Liquid Metal Angiography -- Liquid Metal as Vascular Embolic Agent to Starve Tumors -- Liquid Metal Injectable Electronics -- Liquid Metal to Connect Damaged Nerves -- Liquid Metal Injectable Bone Cement -- Flexible Human Exoskeleton -- Liquid Metal Skin Electronics -- Liquid Metal Printed Biosensors -- Liquid Metal Wearable Electronics -- Liquid Alkali Alloy Enabled Chemothermal Therapy. |
| Sommario/riassunto | This is the first-ever book to illustrate the principles and applications of liquid metal biomaterials. Room-temperature liquid metal materials are rapidly emerging as next-generation functional materials that display many unconventional properties superior to those of conventional biomaterials. Their outstanding, unique versatility (“one material, diverse capabilities”) opens many exciting opportunities for the medical sciences. The book reviews representative applications of liquid metal biomaterials from both therapeutic and diagnostic aspects. It also discusses related efforts to employ liquid metals to overcome |

today's biomedical challenges. It will provide readers with a comprehensive understanding of the technical advances and fundamental discoveries on the frontier, and thus equip them to investigate and utilize liquid metal biomaterials to tackle various critical problems.

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| 2. Record Nr. | UNINA9910741158903321 |
| Titolo | Advances in Gear Theory and Gear Cutting Tool Design // edited by Stephen P. Radzevich, Michael Storchak |
| Pubbl/distr/stampa | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022 |
| ISBN | 3-030-92262-6 |
| Edizione | [1st ed. 2022.] |
| Descrizione fisica | 1 online resource (644 pages) |
| Collana | Engineering Series |
| Disciplina | 621.833 |
| Soggetti | Industrial engineering Production engineering Manufactures Engines Automotive engineering Vehicles Industrial and Production Engineering Machines, Tools, Processes Engine Technology Automotive Engineering Vehicle Engineering |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Fundamental Laws of Gearing -- On the Key Mistake in Generating Envelopes to a Family of Curves and Surfaces: A Special Case of Kinematics of Enveloping – Rolling Motion -- Meshing limit line of Archimedes worm drive -- Sinusoidal Gears and a New Method of Their Cutting -- Design of technological systems for gear finishing -- |

Generalized Unified Model for Synthesis of Links of Parallel-Axes Gear Systems -- Gear cutting with disc-shaped milling cutters -- Additive Technologies and Gradient Materials for Plastic Gear Production -- Quality Characteristics of Gearing -- Multi-parameter gear drives and gear variators (CVTs) -- Calculation of Gear Trains for Transmission Systems of Mobile Vehicles -- Analysis of Structures of Automatic Split-Power Gear Transmissions (CVTs) -- Kinematics, statics and dynamics of complex and coupled cylindrical planetary gears -- Carefully, Scrupulously, Responsibly (in memoriam of Professor Dmitriy Babichev) -- Appendices.

Sommario/riassunto

This book was written by a team of leading gear experts from across the globe, including contributions from USA, Germany, Poland, China, Russia, Ukraine, and Belarus. It provides readers with the latest accomplishments in the gear theory and gear cutting tool design. Specialists can apply competencies gained from this book to quality control in gear manufacture, as well as to the conditions of their production. The book begins with a detailed discussion of the kinematics and geometry of geometrically-accurate gears and gear systems. This is followed by an analysis of state-of-the-art gear manufacturing methods with focus on gear finishing operations. Novel designs of gear transmission systems as well as gear theory and gear cutting tool design are also covered. .
